

AMENDMENTS TO THE SPECIFICATION:

Page 4:

Please substitute the following paragraph for the paragraph beginning at line 10:

In an effort to solve the above-mentioned problems the present inventors ~~are making~~made a study about means for forming a package on which is mounted a semiconductor chip with high-speed LSI formed thereon by adopting a wire bonding method and a packaging method which uses a plastic material such as an epoxy resin as a packaging material. Through this study the present inventors found out the following problem.

Page 17:

Please substitute the following paragraph for the paragraph beginning at line 13:

The present ~~inventor has~~inventors have checked a capacitance dependence of a signal reflection characteristic of the fourth-layer wiring 14A while setting the inductance of wire 23 to 1 nH and the distance L1 (see Fig. 1) between the region PAD and the region 31 in the fourth-layer wiring 14A to three values of 0, 50, and 100 μm . As shown in Fig. 5, as the distance L1 increases, a voltage standing wave ratio (VSWR) relative to the frequency of a signal traveling through the fourth-layer wiring 14A becomes smaller. That the voltage standing wave ratio becomes smaller means that the capacitance value of the capacitor formed by using the

first-layer wiring 11 (see Figs. 1 to 3), the fourth-layer wiring 14A and the interlayer insulating films 15 (see Figs. 1 to 3) becomes larger and the transmission signal loss increases. As noted previously, the semiconductor device of this first embodiment is an IC for optical communication and the frequency of the signal traveling through the fourth-layer wiring 14A is about 12 GHz or less. If a signal of such a frequency band travels through the fourth-layer wiring 14A having the distance L1 of 100 μm , the transmission signal loss becomes large and thus it follows that designing the distance L1 to 100 μm is not appropriate. On the other hand, that the voltage standing wave ratio becomes larger means that the reflection of the signal traveling through the fourth-layer wiring 14A becomes larger. Besides, as mentioned earlier, with an increase in transmission speed (frequency) of the signal traveling through the fourth-layer wiring 14A, the reflection of the transmission signal becomes larger. Since the semiconductor device of this first embodiment is an IC for optical communication, a signal of a high frequency (e.g., 1 GHz or higher) travels through the fourth-layer wiring 14A. Therefore, as shown in Fig. 5, if the distance L1 is 0 μm , the reflection of the signal traveling through the fourth-layer wiring 14A becomes large and thus it follows that designing the distance L1 to 0 μm is inappropriate. In view of this point, if the distance L1 is designed to be 50 μm intermediate between 0 and 100 μm , it becomes possible to

prevent both loss and reflection of the transmission signal in the fourth-layer wiring 14A. In the experiment conducted by the present inventors, by setting the distance L1 at 50 μ m, it became possible to prevent both loss and reflection of the transmission signal in the fourth-layer wiring 14A. But it goes without saying that the distance L1 can be changed in accordance with design values of other members than the fourth-layer wiring 14A.

Page 21:

Please substitute the following paragraph for the paragraph beginning at line 21:

Also by such a semiconductor device of this third embodiment it is possible to obtain the same effects as in the semiconductor device of the first embodiment.

Page 27:

Please substitute the following paragraph for the paragraph beginning at line 10:

The QFN 40 is a semiconductor package for high frequency and, for the dissipation of heat generated from the semiconductor chip 42 during high-speed operation, it has a heat dissipating structure wherein the die pad 41a bonded to the semiconductor chip 42 is exposed to the mounting surface 43a of the sealing member 43, as shown in Fig. 1718.